SOCIAL TRUST AND CIVIC ENGAGEMENT. A THREE-WAVE ANALYSIS AMONG ADOLESCENTS.

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Paper to presented at the Trust Matchpoint Seminar. Aarhus University, Denmark.

22-24 May 2014

Abstract

This study analyses how participation in associations and social trust are intertwined using latent growth curve modeling and three-wave data among adolescents. We find that especially youth, helping, ethnic and religious groups are positively related to more social trust. Participation in associations at age 16 is associated with more trust at age 16 and increasing trust over time. Intensity of involvement is not related to social trust, while duration of involvement did not matter more than membership at one time-point. On the other hand, high levels of trust age 16 are associated with less increase in trust and active participants experience less growth in participation.

Keywords

Social trust, generalized trust, civic engagement, voluntary associations, longitudinal

Introduction

Since the concept of social capital was (re)introduced in the social sciences, a lot of researchers tried to (re)define the concept (for an overview see Bjørnskov and Sønderskov, 2012) One of the most popular definitions of social capital is the one of Putnam, that argues that social capital are the "features of social organization, such as trust, norms, and networks, that can improve the efficiency of society by facilitating coordinated actions" (Putnam, 1993: 167) and later he (re)defined social capital as "connections among individuals – social networks and the norms of reciprocity and trustworthiness that arise from them" (Putnam, 2000: 19). Although Putnam saw the concept of social capital as unidimensional, this unidimensionality has been challenged frequently (Paxton, 1999, Uslaner, 2002), and even empirically it has been shown that networks, social norms and social trust are three separate dimensions (Bjørnskov and Sønderskov, 2012). Therefore, this study will explore the relationship between two of its dimensions: social trust and civic engagement.

As will be shown in the literature review, several studies have explored the relationship between social (or generalized) trust and civic engagement, leading to a diverse set of findings and conclusions, also about the causal nature of this process. Thus far, thorough analysis of the link between social trust and civic engagement, especially in a causal manner, seems lacking. As far as we are aware of, no study has thus far explored the relationship between social trust and civic engagement, using longitudinal data among young people, and have used several different operationalization's of memberships of voluntary associations (number of associations, type, intensity and duration). Therefore, we proceed with the following set-up of this article. First, we will present the main findings of previous research, leading to four hypotheses. Then we present the data and

analyses that are used to explore the claims made in our hypotheses, followed by a conclusion that summarizes our findings and suggests some avenues for further research.

Link between social trust and voluntary civic engagement: "Causality?"

Research has shown that there is a significant link between civic engagement and social trust (Verba *et al.*, 1995), although this link is not often studied in a longitudinal manner. Putnam (2000: 137) described this relationship as a 'well-tossed spaghetti'. While Putnam argues that his study can not prove any causalities (Putnam, 2001), in recent years, several authors have tried to unravel this tangle (Sonderskov, 2011). Two theoretical perspectives prevail in this matter: socialization (e.g. participation leads to social trust) and self-selection (e.g. social trust leads to participation) (for a review see Sonderskov, 2011).

First, there is the notion supported by de Tocqueville and Putnam that associations function as a school of democracy: in associations people develop social skills that are relevant voor democracy and society, social trust amongst others. According to this perspective, associations socialize young people as trusting citizens. Several studies have found proof for this perspective. Brehm and Rahn (1997) have shown that civic engagement (operationalized as membership of associations) leads to more trust, more than the reverse pattern (Paxton, 2007: 54). Park and Subramanian (2012: 1202) also have shown that the relationship from participation to trust is stronger than the effect of trust on participation, using the data from the World Values Survey and Bayesian multilevel analyses. Additionally, Claibourn and Martin (2000) find limited evidence that participation leads to more trust using panel data.

However, the self-selection perspective also received substantial credit: people with more trust are more likely to join (and remain a member of voluntary associations) while the less trusting people are more likely to refrain from participation (Stolle, 2001, Uslaner and Brown, 2005). Already a while ago, Rosenberg (1956) argued that faith in people will affect his interpersonal relationship: trusters will be more likely to create bonds with other people (which will affect their likelihood to engage in associations) and trusters will be more trusting towards others (which makes associations a nicer environment for everyone). Of course there is also empirical proof for this relationship. Dietlind Stolle (2001), for instance, finds that people with more social trust in Germany, the United States, and Sweden are more trusting before they join associations – social trust is thus not created by membership in voluntary associations. Other authors found that social trust affects passive membership of associations that produce public goods (e.g. environmental associations, labor unions and political parties) (Sonderskov, 2011). Bekkers (2012), on the other hand, argues that people with low levels of trust are more likely to quit volunteering. At the aggregate level, it has been shown between social trust leads to more political participation, volunteering and giving (Uslaner and Brown, 2005). Additionally, it has been shown that passive and active members do not differentiate in levels of social trust (Wollebaek and Selle, 2002). So overall, most research point to the fact that trust leads to joining associations.

Still other studies argue that the relationship between voluntary engagement and social trust is rather limited or non-existent (Brehm and Rahn, 1997, Delhey and Newton, 2005, Quintelier, 2013, Stolle, 1998, Wollebaek and Stromsnes, 2008). They argue that we should not explore a link between participation and trust because trust is already developed at a very young age, before one starts joining associations (Erikson, 1950), and remains quite stable afterwards (Bekkers, 2012, Uslaner, 2002). Even if associations

can have an effect, people do not spend sufficient time in these associations so that they can have significant effects and that it is unlikely that people can affect each other's level of social trust within associations (Newton, 1997, Uslaner, 2002). Second, not all forms of participation might be linked with social trust (Hooghe and Quintelier, 2013, Stolle and Rochon, 1998). Especially bridging associations seem vital in this respect (Putnam, 2000). Paxton (2007) for instance suggests that there is a difference between associations that have a lot of members that are connected to different associations compared to people in associations with a lot of isolated members (see also Park and Subramanian, 2012: for a slightly different operationalization). As most research uses an index of voluntary associations and/or political participation, positive and negative effects might cancel out or leading to lower coefficients. Therefore, this study will compare the effects of different types of associations. Third, this link is mostly explored using cross-sectional data, which do not allow to explore causality, and control for prior attitudes. Although there are some exceptions that use panel data (Bekkers, 2012, Claibourn and Martin, 2000), most studies postulate causal links without using repeated measures among the same individuals. Therefore, this study will use different measures of associational membership (duration and intensity of involvement, type of association) and use longitudinal data.

Hypotheses

This article aims to disentangle the relationship between participation in voluntary associations and social trust. First, we aim answering what specific factors are linked with social capital: the number of memberships, the type of membership, the intensity and/or duration of involvement. The specific hypotheses are expanded on below. In a

second step, we will perform longitudinal analyses to determine the causal effect of participation on trust (or vice versa).

First, we measure whether people belong to at least one association and determine the density of associational memberships, e.g. the number of memberships that young people have (Norris and Inglehart, 2003). It is argued that more memberships lead to more cross-cutting exposure and that this might generate more social trust (Granovetter, 1973, Paxton, 2007, Putnam, 2000, Wollebaek and Selle, 2002). Activity breadth offers young people the opportunity 'to build flexible skill repertoires, develop relationships with a variety of individuals, and provide multiple sources of positive experience' (Rose-Krasnor, 2009: 500). Research has shown that more memberships lead to more trust, both at the individual and aggregate level among adult populations.

Hypothesis 1 (number of memberships): It is hypothesized that more (cross-cutting) memberships are associated with more social trust.

Second, we differentiate between different types of associations, based on the type of activities they do and outcomes they try to generate. Research has shown that different associations can have different outcomes: 'not all associations contribute to social capital in the same ways or to the same degree' (Hooghe and Quintelier, 2013, Stolle and Rochon, 1998: 49). Previous research among adults suggest that people in community, cultural and personal interest associations have more social trust than people in political, economic and group rights associations and that members of advocacy groups have higher levels of civic participation than members of social groups (Stolle and Rochon, 1998, Wollebaek and Selle, 2002).

Hypothesis 2 (type): It is expected that different types of associations membership are associated with different levels of social trust.

Third, we explore the effect of duration of membership. It has been argued that people do not spend sufficient time in associations to develop trust (Newton, 1997, Uslaner, 2002). If this argument is true, people who spend a lot of time in their association (e.g. several times a week) or are a member for several years, we will most likely encounter positive effects among this group. A similar reasoning has been proposed for active and passive memberships (Sonderskov, 2011), although the evidence is less convincing on this topic (Wollebaek and Selle, 2002). Whereas most (single-wave) studies have incorporated intensity of involvement (Alexander *et al.*, 2012, Wollebaek and Selle, 2002), the duration of involvement might have larger implications. We predict that the duration of participation will predict more positive outcomes as social trust. Previously, longer engagement in extracurricular activities has been associated with more positive outcomes as higher grades, higher school belonging, higher self-worth and less alcohol use (Fredricks and Eccles, 2006).

Hypothesis 3a (intensity): it is expected that if people have a higher intensity of engagement in associations are linked with higher levels of trust.

Hypothesis 3b (duration): it is expected that a longer duration of membership is associated with more social trust.

And, as most literature indicates that trusters are more likely to join associations, we hypothesise that:

Hypothesis 4: people with high levels of social trust are more likely to join associations rather than participation to increase levels of trust.

Data

The data that will be used for the analyses are the three waves of the Belgian Political Panel Survey (BPPS) 2006-2011. The BPPS 2006-2011 is a three-wave panel study among 16, 18- and 21-year-olds. In 2006, a representative survey was conducted among 6,330 16-year-olds in Belgium, and the response analysis demonstrated that the survey was representative for language, school type, education track, gender and region. Based on written surveys completed by respondents in 112 schools, the study focused on adolescents' social and political attitudes and it contained questions about their background characteristics, political activities and political attitudes. To obtain a national random sample, all schools included in the survey were selected through a stratified sample, based on the location and type of the school. In each school, a minimum of 50 students were selected, representative of the tracks being offered in that school (Hooghe *et al.*, 2006).

In 2008, the respondents were surveyed again for a second wave, this time at the age of 18. While most of the initial respondents could still be reached in school, for those who had left or changed schools, alternative strategies had to be developed. Of the initial 112 schools, 109 participated again in the survey in 2008. In these schools, the same classes were re-surveyed. This allowed re-interviewing 2,988 students. The other students were contacted through a mail survey. In total, 4,235 pupils (or 67 percent) from the initial panel were re-surveyed. In 2011, at the age of 21, the respondents that participated already twice in the survey, were asked to fill in a third survey. Of the initial 6,330 adolescents, 3,025 (or 48 percent) could be contacted again by mail or internet survey. Analyses indicate that this panel is still representative for the initial study population

(Hooghe *et al.*, 2011). 51.8 percent of the remaining respondents is female and 3.3 percent has a non-Belgian nationality.

Measurements

Social trust was measured by two standard questions (1) 'In general, do you think that most people can be trusted or that you can't be careful enough with people?' and the answer ranged from 0 'You can never be too careful when dealing with others' to 10 'Most people can be trusted' and (2) 'Generally speaking, do you think people are helpful or do they first of all think of themselves?' where 0 means 'People first of all think of themselves' and 10 'Most people are helpful'. For the analyses, we computed a factor score for the levels of social trust at the 3 time points, where a higher score indicates more social trust (age 16: eigenvalue: 1.43, explained variance: 71.7 per cent; age 18: eigenvalue: 1.47, expl. var.: 73.6 per cent; age 21: eigenvalue: 1.54, expl. var.: 77.1 per cent). We find a correlation of .37 between Time 1 and 2, .45 between Time 2 and 3 and .31 over the whole five year period. This indicates that trust is quite stable but that there is still some room for change at this age.

Participation in voluntary associations was measured in several ways. First, respondents were asked to indicate which association they are a member of, out of a list of 15 pre-defined associations at age 16 and 18, and a list of 23 associations at age 21 (see appendix 1 for a list of the associations). First, of these lists, sumscales were created to measure the intensity of engagement. Second, to measure type of association, six types of voluntary association were created, based on the characteristics and purposes of the organizations (Table I) (Quintelier, 2008, Stoll, 2001, Wollebaek and Selle, 2002). First, we have the sports and hobby groups as expressive forms of participation (Glanville, 1999, Hanks, 1981). These are also cited as the most frequently reported type of

membership: 40 to 50 percent of the young people is a member of these associations. 26 per cent of the population remains a member at all 3 time points, and of the initial 53 per cent, 49 per cent remains a member of this type of associations during the survey period. Second, 'youth organizations' refers to youth clubs and youth groups such as Scout groups and the like, typically Belgian organizations such as Chiro, KSA-VKSJ. Contrary to other countries, such youth groups and clubs in Belgium are led by young people (aged 16 to 30) themselves. Although they reach 'only' on third of the adolescents, more than half of the members is still a member at age 18 and 21. Third, cultural groups include music, dance or theatre, and are mostly joined by girls. Learning to play an instrument after school at a conservatory is also popular in Belgium; 10 per cent of young people participate in these classes. However, this is an activity young people are much more likely to give up than sports or youth associations: while 33 per cent of the adolescents is a member at age 16, only 11 per cent does so at age 21. Fourth, 'help' organizations aim to help disadvantaged people or places. Environmental, peace, Third World, anti-racism and volunteer organizations are just a few examples. This associations become more popular among late adolescents and young adults: they grow from 10 to 17 per cent. Fifth, deliberative organizations provide a forum for debating current issues and may be situated within the school (e.g. the school council), but also in the more public context offered by political parties and citizen assemblies (Flanagan and Stout, 2010, Quintelier, 2013). This type of engagement, even though they are often not elected, is fairly unstable: only 1 per cent indicates being a member al all 3 time points. Finally, religious–ethnic organizations are ethnically or religiously inspired (mostly Catholic) organizations (e.g. youth union, member of a health insurance fund). These associations have the lowest level of involvement (between 4 and 6 per cent) and subsequently also low levels of stability in membership.

Table I. around here.

Third, we also measured the intensity of the most important associations of the young people (at age 16 and 18) using the question: 'How often have you participated in the activities of the group that you spend most on your time with?' (1: fewer than once a month, 2: once a month, 3: twice a month, 4: once every week, 5: a number of times every week, 6: every day). Finally, we also coded a variable to indicate the duration of each type of membership, where 0 indicates 'not a member', 1 'a member at 1 time point', 2 ' a member at two time points' and 3 'a member at all three time points[i]. These measures self-evidently correlate quite highly with membership of that association. The percentage of people that are a member at all three time points can be found in Table I (column 4).

In the analyses, we control for gender, socio-economic status and religious attendance. Socioeconomic status is measured as a factor-scale of the current level of education, the educational goal and the number of books at home at age 16 (Syvertsen *et al.*, 2011). Gender is a dummy where a 1 indicates being a girl. Religious attendance is measures by the frequency of going to religious services (never, a few times a year, a few times every month, once every week, more than once a week), as we want to control whether religious associations are linked with social trust and that this relationship is not due to the religious activism of the participants (Traunmüller, 2011).

Analysis

In a first step, we explore the bivariate correlations between social trust at age 21 (and the change in trust between age 16 and 21) and the different operationalization of participation in associations at age 16. So this will already give us a first hint of whether

participation in associations is linked with social trust later in life. First, we find the highest correlation between the number of associations and social trust: more memberships at age 16 are associated with a higher level of social trust at age 16. Although correlations are a quite insensitive test, this correlation might indicate that hypothesis 1 could be confirmed. This association might be also causal in nature, as the level of social trust slightly increases for people with more memberships, although on average, social trust remains quite stable (Change in social trust age 16-21: M: 0.01; SD: 1,17).

Second, we also hypothesized that different types of associations and associations with different characteristics could have different effects on social trust. This seems to be the case: some types of associations as youth and cultural groups are more linked with social trust. On the other hand, deliberative groups are not linked to social trust. While helping, ethnic and religious groups are somewhere in the middle, the participants in these associations tend to develop more social trust over time than others.

In a third step, we look at the level of involvement and duration of the engagement. With respect to intensity, we find, surprisingly, that a higher level of intensity is correlated with less social trust. This indicates that the more time people spend within associations, the less trusting they become (as also indicated by the negative effect on the change factor). Looking to duration, finally, we observe significant correlations with social trust, yet not with change in social trust. These correlations are comparable in magnitude to the effects of membership at age 16. The longer one retains a member of different types of associations, the more trusting (s)he is at age 21.

Special attention needs to be paid to youth groups: at this point, they seem to be the most effective in sustaining and developing social trust. Probably, the way they are

structured causes the link with social trust. In youth groups, young people are responsible for their own activities, organizing them with peers and most of the time without any supervision of adults. These horizontally structured associations might be providing the best circumstances for social trust, on the contrary to deliberative associations where young people are most of the time not the leading persons and that are vertically structured.

Table II. around here.

Table III presents the regression analyses exploring the effect of different operationalizations on social trust at age 21, controlling for the levels of social trust at age 16. However, due to multicollinearity, all factors can not be entered simultaneously in the regression analyses. Therefore, we present 3 different analyses: one including the different types (Model 1), one including the sum scale of associations, intensity and duration (Model 2) and a third one as the result of a backward selection (Model 3).

First, whereas we found that more memberships lead to more social trust in Table II, if we control for other memberships, and especially previous levels of social trust, this significant relationship disappears. We thus find no proof of hypothesis 1, e.g. that more memberships lead to more social trust. This is an important nuance to previous research that has shown that has often used sum scales of organizational affiliation to relate to social trust. Second, the data show that specific types of associations lead to higher levels of trust at age 21 (even if we control for levels of social trust at age 16). Especially youth groups, and to a lesser extent cultural, ethnic and religious groups contribute to social trust. People that are a member of deliberative associations at age 16 even experience a decline in social trust. Hereby, our second hypothesis is confirmed: people

that are member of specific types of associations (e.g. youth, cultural, helping and ethnic and religious groups) lead to higher or increasing levels of trust.

Concerning the third hypothesis, we find much less proof. Although we find some positive effects of people who argue that they were a member of youth, ethnic or religious groups at the three time points on social trust and a growth of social trust among for those who were a member of an helping organization, these effects are equal in magnitude than the effect of membership at age 16. Only for some associations a longer membership has more positive effects, in concreto helping and youth associations. If a longer membership would have more effects, these coefficients should be significantly larger. This evidence thus points to self-selection, as a longer duration of membership does not lead to more social trust than membership at one time point. However, this argument needs further testing (see Table IV).

Finally, looking to the control variables, we find that young people with a higher socio-economic status have more social trust. Girls, on the other hand, are less trusting. Those that attend religious services regularly are slightly more likely to be trusting. Having the Belgian nationality does not influence your social trust. Social trust at age 16 has a strong and significant influence on the level of social trust at age 21.

Table III. around here.

As previous analyses have demonstrated, the most fruitful avenue to find significant links between social trust and participation in associations seems looking at the specific types one is a member of. Therefore, we fitted a latent growth curve model for each type of association and social trust. A latent growth curve model is an application of structural equation modeling. Fundamental to this type of model is that it estimates the

mean starting values for the dependent variables, as well as the growth trajectories of the dependent variables over time of the three measurement points (Kline, 2011). Additionally, parameters that explain these starting values and growth trajectories can be added.

The results of these six models are presented in Table IV. First, we find that there is a significant correlation between participation for all types of participation and social trust, except for helping groups and ethnic and religious groups. For most associations, it is thus the case that more trust is associated with one or more memberships. On the other hand, we find that a change in participation is not associated with a change in trust (except for youth groups). Only for youth groups, we find that a growth in social trust is linked with a growth in youth associational membership. On the other hand, we find for three measures of participation (youth groups, helping groups, ethnic and religious groups) that the initial level of participation is associated with a slight increase in social trust, indicating that still some level of socialization might take place. This is especially remarkable, since for most people high initial levels of participation or social trust are linked with less increase in levels of participation or social trust. So overall, we find most clear evidence for socialization because higher initial levels of participation are linked with increasing levels of social trust, even under circumstances where it is not self-evident that social trust grows (given the negative correlation between the initial level and slope).

Finally, we also have a look at the control variables, and find that a higher socio-economic status is associated with more social trust, and a significant growth in social trust. This shows that the gap in social trust between high and low socio-economic status groups grow over time. For participation we find that a higher socio-economic

status is associated with more participation at age 16, but this gap declines afterwards probably due to the engagement in higher education of the higher socio-economic strata (with the exception of youth groups which also included associations for students in higher education). Girls and boys have similar levels of social trust at age 16, but the level of trust of young girls declines more easily afterwards. We find that girls are more active in cultural, helping and ethnic groups and boys more active in sport and hobby groups. Over time, girls become more involved in helping groups, but less in youth, cultural and deliberative groups. For nationality we find no differences in social trust, and some small differences with respect to participation: immigrants are slightly less likely to be member of a sports club or youth group, and are less likely to become a member of a deliberative association. Attendance of religious services, finally is associated with more social trust (but not more growth), and more participation in associations. Religious practitioners are slightly less likely to attend cultural groups over time and more helping groups.

Table IV. around here.

Conclusion

The aim of this article is to explore if and how participation in associations are related to social trust. First, we explored using four different operationalization how participation and social trust are related, using the number of associations, type of associations, intensity and duration of involvement as indicators. We found that the number of associations one is a member of is not linked with more participation if we control for the specific types of associations (H1)[ii]. We distinguished between six types of groups: (1) sports and hobby groups, (2) youth organizations – i.e. youth clubs and youth groups such as Scout groups, (3) cultural groups – i.e music, dance or theatre groups and

conservatory, (4) helping groups include environmental, peace, Third World, anti-racism and volunteer organizations, (5) deliberative organizations as the school council, political parties and citizen assemblies (6) religious–ethnic organizations (e.g. youth union, member of a health insurance fund). Especially participation in youth, cultural and ethnic and religious groups seems to be linked with more social trust. This confirmed our second hypothesis, e.g. that type of membership matters. Third we also explored whether the intensity and duration matters for social trust (H3). We found that more intense memberships were not correlated with more social trust and the a longer duration of a specific membership does not lead to more social trust compared to the effect of a membership at one time-point (Time 1). These findings were later reconfirmed in the latent growth curve models which showed that a change in participation was almost never associated with a change in social trust. This thus did not confirm our third hypothesis. To the contrary, we found that intensity and duration of membership are not associated with more social trust.

In a second step, we tried to explore how participation and social trust are intertwined. We find that people must partly self-select into associations as there is a substantial correlation between participation and trust at age 16. Although we must note that this correlation might also be the effect of socialization before the age of 16, but this process is less likely. On the other hand, there is also some more evidence for the socialization perspective: the level of social trust of participants in youth, helping and ethnic and religious groups tends to increase over time; and an increase in memberships of youth groups is associated with a positive change in social trust. Given these findings, it must be that some essential process happen at a very young age, and that the period of late adolescence is a relevant period to study. Finally, we also find that people that are

already prone to engage are less likely to accumulate memberships over time and people with high levels of trust are also less likely to become more trusting over time.

This article thus demonstrates that membership of specific types of is good for one's level of social trust. Particularly youth, helping, ethnic and religious associations are linked with higher and increasing levels of trust. Despite the negative ideas about this link, this article has demonstrated that both are related and that there is even some room for socialization. Therefore, this study fits neatly within the recent stream of research that has proven that participation leads to an increase in civically relevant attitudes (Christens *et al.*, 2011, Gastil and Xenos, 2010, Quintelier and Van Deth, forthcoming).

On the other side, we find that those with high levels of trust do not develop social trust over time, and those with high levels of participation do not increase their engagement over time. For trust, it is the question whether this is a 'natural' ceiling effect (we can not trust *everyone*, or the equivalent of a maximum score of 10), a methodological issue (because they already reached a maximum score) or that a lot of social trust is not rewarded over the period of study. For participation, this might be even more worrisome, since most people have only 1 or 2 memberships, and thus room for additional memberships. The question is why people with already a lot of memberships do not increase their level of engagement: due to limited available time, due to other engagements (such as study, family), or is this an effect of the decline in participation among young people (Putnam, 2000)? Due to the limitations of the current dataset we can not accurately answer these questions, but these should be the topic of future investigation.

Overall, this article leads to new insights in the field of voluntary associations and social trust using longitudinal data and a diversity of associations. However, this article suffers from some limitations that cannot be solved using the current data. First and foremost, given that we already observe a high correlation between social trust and participation (especially compared to the correlation of social trust over time) at age 16, it forces us to look into even younger adolescents' attitudes and behavior. Second, the analysis shows that different types of associations have different effects on social trust. Especially youth groups, and to a lesser extent helping, ethnic and religious groups have a positive effect on social trust. Case studies of these types of associations might help developing insights in why and how these associations are more beneficial for social trust than others (Achbari, forthcoming), and future research should especially avoid taking all types of membership together. In this light, one might also consider to survey specific surveys, so that one can take specific characteristics of the associations into account (as composition, structure etc.). Third, future research should not only focus on more specific participation repertoires, but also on a broader variety of social trust-like measures as optimism, well-being and altruism for instance (Maloney *et al.*, 2008, Uslaner, 2002). Developing and using more and more sensitive scales of social trust will lead to a better understanding of how these processes work.

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Appendix 1. List of associations

Type of association	Age 16 & 18	Age 21
Sport and hobby	Sports organization Hobby club (cooking, stamp collecting, chess, …)	Hobbyclub or group (cooking, sewing, stamp collecting, wine tasting,..) Sportsgroup or club (also walking, chess, …) A group linked with a local café (mostly around sports) Family organisation Fanclub
Youth groups	Youth organizations, youth movement (Boy or girl scouts, KSA, …) Youth centre, youth clubs An organization in school (school newspaper, …)	Youth organizations, youth movement Studentassociation
Cultural groups	Cultural or art organization (theatre, music, dance, …) Music lessons - conservatory	Art organisation (choir, theatre, literature, dance, …)
Helping groups	Volunteer organizations (Bouworde (organization for young people doing voluntary work abroad), Playground child care, Red Cross, …) Environment, peace, third world, antiracist and human rights organization (Greenpeace, Amnesty International, …)	Environment, nature or animal protection organization International peace, third world, humanitarian aid and human rights organization (Amnesty International, fair trade shop) Red Cross, Flemish Cross, voluntary firemen, other emergency service Selfhelpgroup

Deliberative groups	School council or pupils' council Youth organization of a political party Youth council, district- and neighbourhood committee, civil parliament or local action group	Political organization or party A neighborhood association, also for carnival, local parties, and local journal Municipal advisory council Parents association Tenant association Consumersassociation
Ethnic and religious groups	Religious or philosophical organizations (Plus-organization, church groups, …) Ethnic/cultural organization (Arab group, …) Youth movement or health insurance organization, trade union (MJA, Young-ACV, …)	Women association (K.A.V., S.V.V., K.V.L.V., …) Socio-cultural assocation Religious association (parochial work, …) Union, tradespeople, employers association Migrant organization

Table I. Percentage member of associations

Type of association	**Age 16**	**Age 18**	**Age 21**	**At 3 time points**	**per cent that remains in type**
Sport and hobby	52.7	44.1	45.4	25.9	49.1
Youth groups	32.0	35.1	39.4	17.0	53.1
Cultural groups	33.5	28.0	10.8	7.5	22.4
Helping groups	9.7	14.8	16.7	2.1	21.6
Deliberative groups	8.5	13.5	10.8	1.0	11.8
Ethnic and religious groups	5.6	4.5	6.4	0.6	10.7

Note: Entries are per cent of people that is a member of a particular association (column 1-3), remains a member of that type at all 3 time points (column 4) and the percentage of people that is a member at time 1 and remains a member throughout the survey period (column 5).

Table II. Bivariate correlations between social trust and participation in associations

Age 16	**Social trust age 21**	**Change in social trust age 16-age21**
Number of associations	.185***	.052**
Type of association		
Sport and hobby	.094***	.038*
Youth groups	.147***	.031
Cultural groups	.103***	.020
Helping groups	.084***	.050**
Deliberative groups	.035	-.018
Ethnic and religious groups	.080***	.042*
Intensity	-.135***	-.041*
Duration (memberships at N timepoints of)		
Sport and hobby groups	.093***	.033
Youth groups	.201***	.065***
Cultural groups	.111***	.015
Helping groups	.106***	.048*
Deliberative groups	.042*	-.003
Ethnic and religious groups	.075***	.019

Note: Data: BPPS 2006-2011; Note. Entries are Pearson correlations and significances; p≤0.05:*; p≤0.01:**; p≤0.001:***.

Table III. OLS regression the effect of different types of participation.

		Social trust age 21	
Age 16			
	Model 1	**Model 2**	**Model 3**
Number of associations		.063	
Type of association			
Sport and hobby	.041*		.037
Youth groups	.090***		
Cultural groups	.046*		.039
Helping groups	.044*		
Deliberative groups	-.024		
Ethnic and religious groups	.051**		.046*
Intensity		-.008	
Duration (memberships at N timepoints of)			
Sport and hobby groups		.008	
Youth groups		.099***	.119***
Cultural groups		.011	
Helping groups		.042*	.052**
Deliberative groups		-.049*	-.039*
Ethnic and religious groups		.020	
Controls			
Socio-economic status	.096***	.083***	.082***
Girl	-.097***	-.092***	-.090***
Nationality	-.013	-.010	
Attendance of religious services	.048**	.044*	.041*
Social trust age 16	.297***	.295***	.296***
R^2	.149	.156	.156
VIF	1.013-1.210	1.016-3.304	1.020-1.222

Note: Data: BPPS 2006-2011; Note. Entries are standardized results and significances; p≤0.05:*; p≤0.01:**; p≤0.001:***. Model III is the result of a backward selection, retaining al parameter estimates p>0.1.

Table IV. Latent growth curve models for the relationship between social trust and different types of associations

	Sport and hobby groups		**Youth groups**		**Cultural groups**		**Helping groups**		**Deliberative groups**		**Ethnic and religious groups**	
Initial level of social trust with initial level of participation	0.113	**	0.179	***	0.097	***	0.052	ns	0.126	**	0.005	ns
Δ in social trust with Δ in participation	-0.029	ns	0.083	*	-0.026	ns	0.003	ns	0.017	ns	0.000	ns
Initial level of social trust with Δ in social trust	-0.246	***	-0.262	***	-0.254	***	-0.255	***	-0.237	***	-0.021	***
Initial level of participation with Δ in participation	-0.341	***	-0.542	***	-0.868	***	-0.494	***	-0.539	***	-0.004	***
Initial level of social trust on Δ in participation	-0.018	ns	-0.012	ns	**-0.065**	*	0.041	ns	-0.043	ns	0.000	ns
Initial level of participation on Δ in social trust	0.02	ns	**0.086**	*	0.055	ns	**0.132**	**	-0.069	ns	**0.087**	*
Controls on initial level of social trust												
Socio-economic status	0.091	***	0.091	***	0.09	***	0.091	***	0.091	***	0.059	***
Girl	0.023	ns	0.023	ns	0.023	ns	0.023	ns	0.023	ns	0.029	ns
Nationality	0.003	ns	0.003	ns	0.003	ns	0.003	ns	0.002	ns	0.010	ns
Attendance of religious services	0.077	**	0.077	**	0.077	**	0.077	**	0.077	**	0.065	**
Controls on initial level of participation												
Socio-economic status	0.234	***	0.082	***	0.285	***	0.173	***	0.131	***	0.010	*
Girl	-0.26	***	0.022	ns	0.202	***	0.104	***	0	ns	0.022	*
Nationality	-0.048	*	-0.086	***	-0.02	ns	-0.01	ns	0.032	ns	0.028	ns
Attendance of religious services	0.022	ns	0.065	**	0.073	***	0.053	*	0.011	ns	0.063	***
Controls on Δ in social trust												
Socio-economic status	0.122	***	0.119	***	0.11	**	0.104	**	0.135	***	0.016	***
Girl	-0.138	***	-0.143	***	-0.152	***	-0.155	***	-0.142	***	-0.040	***
Nationality	-0.039	ns	-0.032	ns	-0.038	ns	-0.038	ns	-0.037	ns	-0.032	ns

Attendance of religious services	0.044	ns	0.038	ns	0.039	ns	0.037	ns	0.045	ns	0.002	ns
Controls on Δ in participation												
Socio-economic status	-0.198	***	0.236	***	-0.241	***	-0.033	ns	-0.085	*	-0.006	***
Girl	0.051	ns	-0.127	***	-0.163	***	0.115	**	-0.091	*	-0.003	ns
Nationality	-0.024	ns	0.032	ns	0.03	ns	0.004	ns	-0.077	*	-0.016	ns
Attendance of religious services	0.004	ns	0.036	ns	-0.049	*	0.101	**	0.051	ns	0.000	ns
Chi^2	105.106		19.516		67.783		34.937		58.124		48.309	
Df (Sign.)	15***		15ns		15***		15*		15***		15***	
RMSEA	0.046		0.010		0.036		0.022		0.032		0.028	
CFI	0.966		0.998		0.985		0.990		0.974		0.982	

Note: Data: BPPS 2006-2011; Note. Entries are standardized results and significances; p≤0.05:*; p≤0.01:**; p≤0.001:***.

[i] It was also tested using a operationalization by which the respondents received a code '1' when they were a member at all three time points and a 0 otherwise. Although these measures are highly correlated (between .4 and .8), this approach lead to slightly lower correlations with social trust.

[ii] This indicates that the significant effect is driven by the effect of specific associations.